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|--------------------|---|----------------------------|--------------------------------|
| Description | Spring steel strip - cold rolled, hardened, tempered | EN-Norm 1.1248 / 1.1248 | DIN Ck75 h + a / C75S h + a |
|--------------------|---|----------------------------|--------------------------------|

Chemical analysis

| Cr | Ni | Mo | Mn | Si | C | P | S |
|-----------|-----------|-----------|-------------|-------------|-------------|------------|------------|
| max. 0.40 | max. 0.40 | max. 0.10 | 0.60 - 0.90 | 0.15 - 0.35 | 0.70 - 0.80 | max. 0.025 | max. 0.025 |

Chemical analysis according to the European standard EN in mass percentages.

Surface Finish

Cold rolled, hardened and blue annealed

Diameter

| Thickness | Width |
|----------------|---------------|
| 0.10 - 4.00 mm | 2.00 - 300 mm |

Width options depend on thickness / other widths ex works.

Tolerances

Thickness tolerances

| Nominal thickness mm | Precision tolerance mm |
|-------------------------|---------------------------|
| < 0.10 | ± 0.006 |
| 0.10 - 0.12 | ± 0.007 |
| 0.13 - 0.24 | ± 0.010 |
| 0.25 - 0.59 | ± 0.015 |
| 0.60 - 0.99 | ± 0.020 |
| 1.00 - 1.49 | ± 0.025 |
| 1.59 - 2.49 | ± 0.030 |
| 2.50 - 3.00 | ± 0.040 |

Width tolerances according to DIN EN ISO 9445

Special tolerances Special thickness and width tolerances can be produced in our service centre according to your specifications.

Sheet dimensions

| Diameter mm | | | | |
|-------------------|-------------------|-------------------|-------------------|-------------------|
| 0.10 x 300 x 2000 | 0.30 x 300 x 2000 | 0.60 x 300 x 2000 | 1.00 x 300 x 2000 | 2.00 x 300 x 2000 |
| 0.15 x 300 x 2000 | 0.40 x 300 x 2000 | 0.70 x 300 x 2000 | 1.20 x 300 x 2000 | 2.50 x 300 x 2000 |
| 0.20 x 300 x 2000 | 0.40 x 300 x 2000 | 0.80 x 300 x 2000 | 1.50 x 300 x 2000 | 3.00 x 300 x 2000 |
| 0.25 x 300 x 2000 | 0.50 x 300 x 2000 | 0.90 x 300 x 2000 | 1.80 x 300 x 2000 | 4.00 x 300 x 2000 |

Mechanical Properties

| Nominal dimension mm | Tensile strength MPa | Yield strength |
|-------------------------|-------------------------|--------------------------|
| 0.10 | 1'885 - 2'040 | ca. 90% tensile strength |
| 0.15 | 1'835 - 1'990 | |
| 0.20 | 1'785 - 1'940 | |
| 0.25 | 1'735 - 1'890 | |
| 0.30 - 0.35 | 1'690 - 1'845 | |
| 0.40 - 0.45 | 1'640 - 1'795 | |
| 0.50 - 0.60 | 1'590 - 1'745 | |
| 0.65 - 0.80 | 1'540 - 1'700 | |
| 0.85 - 1.10 | 1'490 - 1'645 | |
| 1.20 - 1.50 | 1'440 - 1'600 | |
| 2.00 | 1'395 - 1'550 | |
| 3.00 | 1'345 - 1'500 | |

Other strength levels on request.

Smallest bending radius

| Thickness mm | Bending 90° Reference values |
|-----------------|---------------------------------|
| 0.10 | 8 s |
| 0.25 | 7 s |
| 0.50 | 5 s |
| 1.00 | 4 s |

Springback

The springback when bending hardened steel strip is significant and must be taken into account when shaping the tools.

Cold forming process

Punching and cold bending are cold forming processes that can have a detrimental effect on the suspension. To restore the original suspension, the fabricated parts must be tempered at 225°C for 1/2 to 1 hour after cold forming.

Physical properties

| | | |
|---------------------------------------|----------------|--|
| Modulus of elasticity, E | 20 °C | 210 GPA |
| Mean coefficient of thermal expansion | 20 °C - 100 °C | 10.8 (10 ⁻⁶ * K ⁻¹) |
| Density (specific weight) | - | 7.86 kg/dm ³ |
| Thermal conductivity | 20 °C | 45 - 55 W / (m*K) |
| Specific electrical resistance | 20 °C | 0.13 (Ohm*mm ²) / m |

Note

All information provided in this data sheet is based on the best knowledge and the latest state of the art, but without guarantee. The use of materials should always be discussed with our [sales specialists](#) or our materials [laboratory](#) on a product- and application-specific basis.

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